

Patent claims What is claimed is?

1. Process for the preparation of non-chiral or optically active alcohols in which a carbonyl compound is reacted with hydrogen in the presence of a catalyst, a base and optionally a diamine, characterized in that the catalyst used is an Ru(II) complex which contains both a support-bonded bisphosphine ligand and also a diamine ligand.

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2. Process according to Claim 1, characterized in that the catalyst is formed in situ from a support-bonded precursor and a diamine.

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3. Process according to Claim 1, characterized in that a catalyst is used which contains both a chirally uniform, support-bonded bisphosphine ligand and also a chirally uniform diamine ligand.

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4. Process according to Claim 3, characterized in that an atropisomeric bisphosphine ligand is present in the catalyst.

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5. Ru(II) complex catalyst, characterized in that the Ru complex contains a support-bonded bisphosphine ligand and a diamine ligand.

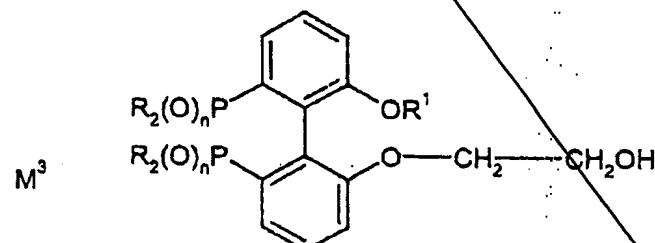
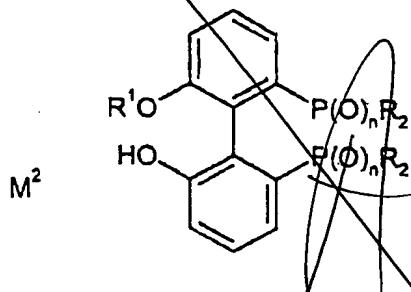
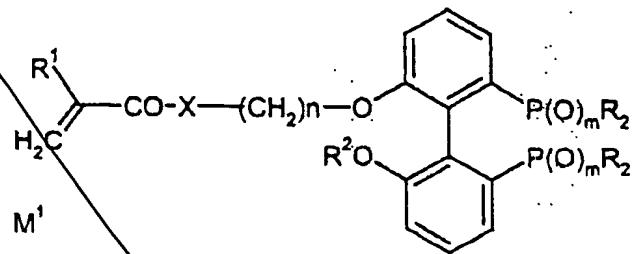
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6. Ru(II) complex catalyst, characterized in that the Ru catalyst has been obtained by linking an inorganic support containing SH groups with a bisphosphine (derivative) capable of polymerization.

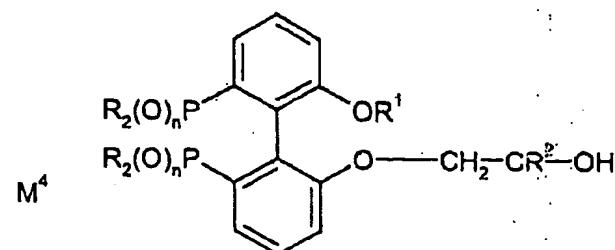
7. Compounds of the formulae $M^1, M^2, M^3, M^4, M^5, M^6, M^7, M^8, M^9, M^{9'}, M^{10}$ and $M^{10'}$,

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- 32 -

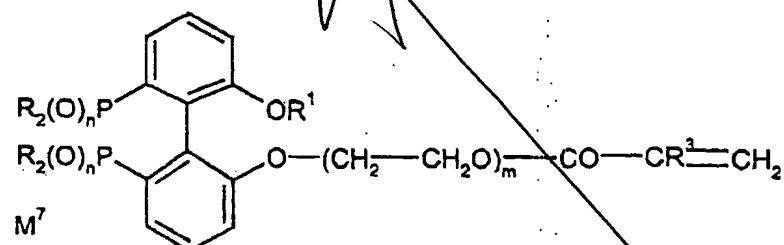
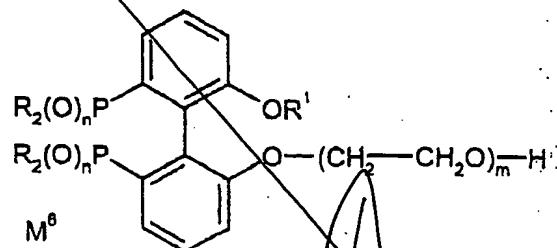
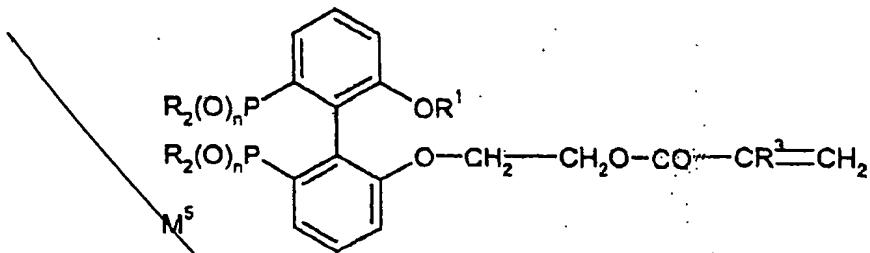


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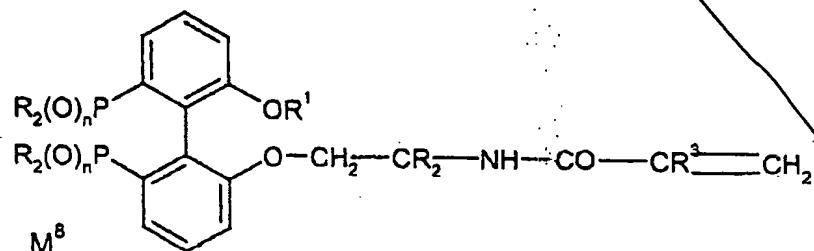


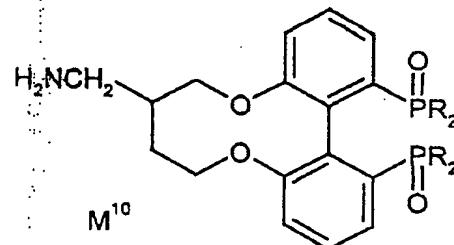
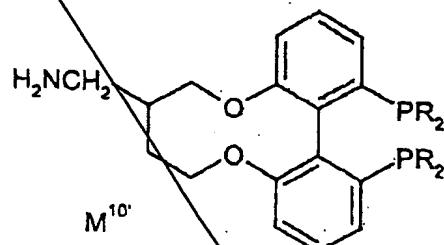
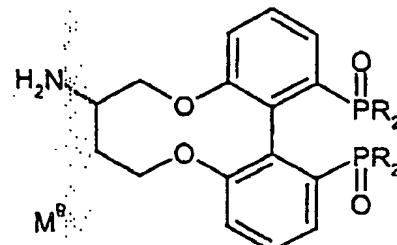
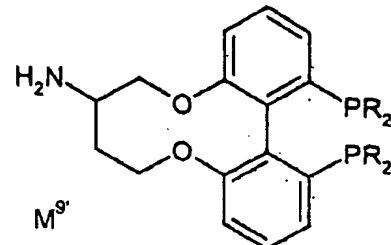
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wherein independently of one another each

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R is phenyl, 2- or 3- or 4-methylphenyl, 3,5-dimethylphenyl, 3,5-dimethyl-4-methoxyphenyl, 3,5-diter-butylphenyl or cyclohexyl, and

15 R¹ and R² are in each case, independently of one another, C₁- to C₈-(cyclo)alkyl and

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R³ is H or CH₃, and

n is 1 or zero, and

m is 2-100.

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